

magnetic sensors, and to said indicator arrangement, for generating a signal indicative of the direction in which [said] a backing bar should be moved.

REMARKS

1. This is in response to the Office Action (Paper Number not indicated) dated September 28, 2000, on which a three-month shortened statutory period for response is set to expire December 28, 2000.

2. Cancel non-elected claims 1-4, and also cancel claims 10-15.

3. Claims 8-17 are rejected under 35 U.S.C. § 103(a) as unpatentable over Hauck et al. in view of Foxworthy. Claims 10-15 are cancelled. This basis for rejection is traversed as to the remaining claims, because (a) the references cannot be combined as suggested by Examiner for lack of a proper nexus for such combination, (b) the references cannot be combined, and (c) the references, even if combined notwithstanding the lack of a proper nexus therefor, do not in such combination make the claimed invention.

The Hauck et al. reference relates to a magnetic field generator and detector position indicator. Examiner comments "Hauck discloses all of the claimed subject matter except for the sensors and indicators being arrayed in a straight line, the laser, the Hall Effect device and the Giant magnetoresistor. Foxworthy teaches in the same field of endeavor arranging sensors and indicators substantially as claimed. It would have been obvious to arrange the sensors and indicators as claimed in the device of Hauck in view of Foxworthy. The laser, the Hall effect device and the Giant

magnetoresistor are considered obvious matter of design choice since they are old and known in the art."

There is a total lack of proper nexus to support Examiner's suggested combination of references. In particular, Examiner justifies the combination by noting that Foxworthy is "in the same field of endeavor" as Hauck et al. Such a statement, even if correct, is not a proper basis by which a reference can be combined with another. In the present case, The Foxworthy reference relates to indicating the position of a control rod in a nuclear reactor, which does not appear to be very similar to the positioning problem solved in Hauck et al. It is only the solution of the Foxworthy problem which involves magnets and sensors which gives some semblance of similarity. However, the problem to which Foxworthy is directed is not the same as that of Hauck et al., and so even that aspect of Examiner's argument appears to fail. Whether it fails or not is irrelevant, however, because even if the references should be deemed to be in the same field of endeavor, this is insufficient to establish a proper nexus for the suggested combination.

The Hauck et al. and Foxworthy references cannot be combined. In particular, the Hauck et al. detection system depends upon an alternating magnetic field, generated by the coil 22' of FIGURE 3. This can be understood by noting that the only magnetic sensors which are described are coils, and coils are incapable of responding electrically to static magnetic fields, such as those of the permanent magnet which is used in Foxworthy. Similarly, Foxworthy shows no way to produce an alternating magnetic field, and presumably power would have to be coupled through the reactor wall to provide such, contrary to the desired effect in Foxworthy. Thus, Hauck et al. and Foxworthy could not be combined as

suggested by Examiner even if there were a proper nexus for such combination, which there is not.

Finally, it is noted that neither Hauck et al. nor Foxworthy alone or in Examiner's suggested combination, if it could properly be made, renders obvious the invention as now recited in claime 8, in that neither the Hauck et al. nor the Foxworthy references describe, suggest or hint at the use of either Hall-Effect devices or Giant Magneto-Resistive sensors. Thus, claim 8 as amended is patentable over the cited art. Claims 9, 16, and 17 as amended are also patentable as depending upon a patentable parent claim, and as further defining the invention.

4. Reconsideration and allowance are requested of claims 8, 9, 16, and 17.

5. An appendix is attached which sets forth the claims in their amended form.

6. The number of claims being reduced by the amendment, no fee is believed to be due. Please charge any additional fees to deposit account 13-1955.

Respectfully submitted,

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Enclosures:
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